

## I. AMENDMENTS TO THE CLAIMS

Claim 1. (Currently Amended) A process ~~to prepare~~ for the preparation of (per)fluorohalogenethers having general formula (I):



wherein:

A and A', equal to or different the one from the other, are Cl or Br or one is selected from A and A' and hydrogen and the other is halogen selected from Cl, Br;

R = F or a fluorinated, ~~preferably perfluorinated~~, substituent, selected from the following groups: linear or branched C<sub>1</sub>-C<sub>20</sub> alkyl ~~more preferably C<sub>4</sub>-C<sub>40</sub>~~; C<sub>3</sub>-C<sub>7</sub> cycloalkyl; aromatic, C<sub>6</sub>-C<sub>10</sub> arylalkyl, alkylaryl; C<sub>5</sub>-C<sub>10</sub> heterocyclic or alkylheterocyclic;

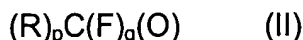
when R is fluorinated or perfluorinated alkyl, cycloalkyl, arylalkyl, alkylaryl, it can optionally contain in the chain one or more oxygen atoms;

when R is fluorinated it can optionally contain one or more H atoms and/or one or more halogen atoms different from F;

n is an integer and is 1 or 2;

m = 3-n;

by reaction of carbonyl compounds having formula (II):



wherein:

p is an integer and is 1 or 2;

q is an integer and is zero or 1, with the proviso that when p = 2, q = 0; when p = 1, q = 1;

R is as above;

in liquid phase with elemental fluorine and with olefinic compounds having formula (III):



wherein A and A' are as above,

operating at temperatures from -120°C to -20°C, ~~preferably from -100°C to -40°C~~, optionally in the presence of a solvent inert under the reaction conditions.

Claim 2. (Original) A process according to claim 1, wherein the fluorine used in the reaction is diluted with an inert gas.

Claim 3. (Currently Amended) A process according to claim 1, wherein the formula (II) compounds are acylfluorides selected from  $\text{COF}_2$ ,  $\text{CF}_3\text{COF}$ ,  $\text{C}_2\text{F}_5\text{COF}$ ,  $\text{C}_3\text{F}_7\text{COF}$ ,  $\text{C}_7\text{F}_{15}\text{COF}$ ,  $\text{CF}_3\text{CF}(\text{OCF}_3)\text{CF}_2\text{CF}_2\text{COF}$ ,  $\text{CF}_3\text{O}(\text{CF}_2)_2\text{COF}$ ; or ketones selected between hexafluoro-acetone, perfluorodiisopropylketone.

Claim 4. (Previously Presented) A process according to claim 1, wherein the formula (II) compounds are acylfluorides.

Claim 5. (Currently Amended) A process according to claim 1, wherein the formula (III) compounds are selected from 1,2-dichloro-1,2-difluoroethylene (CFC 1112), 1,2-dibromo-1,2-difluoro-ethylene, ~~preferably CFC 1112.~~

Claim 6. (Previously Presented) A process according to claim 1, wherein the reaction can be carried out in a semicontinuous or continuous way.

Claim 7. (Original) A process according to claim 6, wherein in the semi-continuous process the molar ratio between the carbonyl compound (II) and the olefin (III) ranges from 0.05 to 10.

Claim 8. (Original) A process according to claim 6, wherein in the continuous process the molar ratio between the carbonyl compound (II) and the olefin (III) ranges from 0.05 to 10, the molar ratio fluorine/olefin (III) ranges from 0.05 to 10.

Claim 9. (New) The process according to claim 1, wherein R = a perfluorinated, substituent.

Claim 10. (New) The process according to claim 1, wherein R is a linear or branched  $\text{C}_1$ - $\text{C}_{10}$  alkyl.

Claim 11. (New) The process according to claim 1, wherein the temperatures are from  $-100^\circ\text{C}$  to  $-40^\circ\text{C}$ .

**Application Serial No.:** 10/633,565  
**Inventor(s):** Tortelli *et al.*  
**Attorney Docket No.:** 108910-00114

Claim 12. (New) The process according to claim 5, wherein the formula (III) compound is CFC 1112.